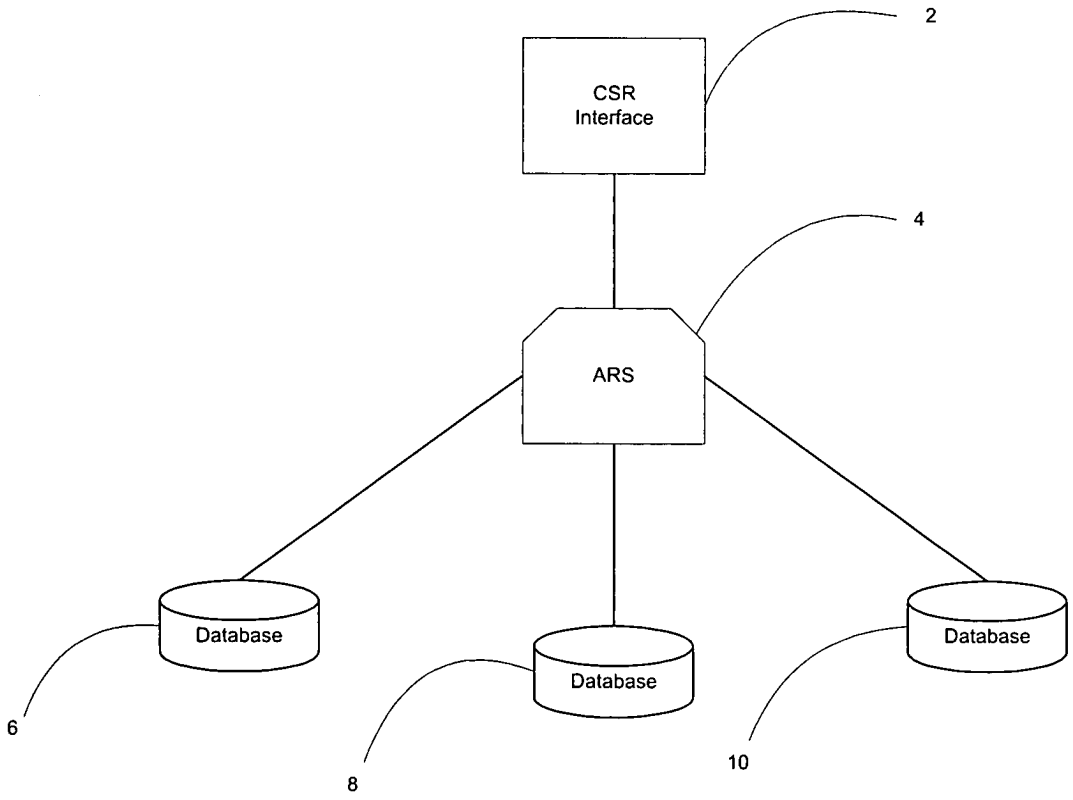



Fig. 1

User Session Task

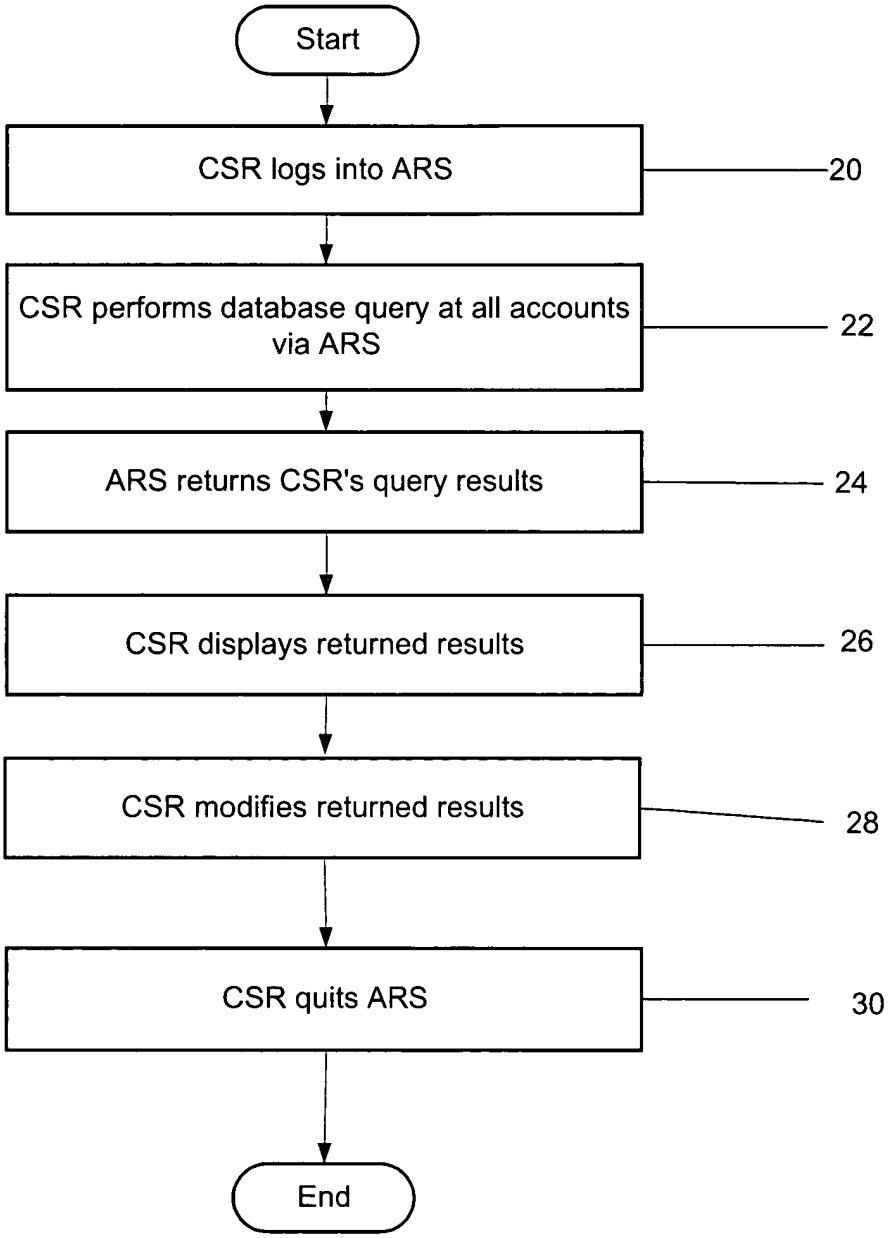



**Fig. 2**

Generalization Method

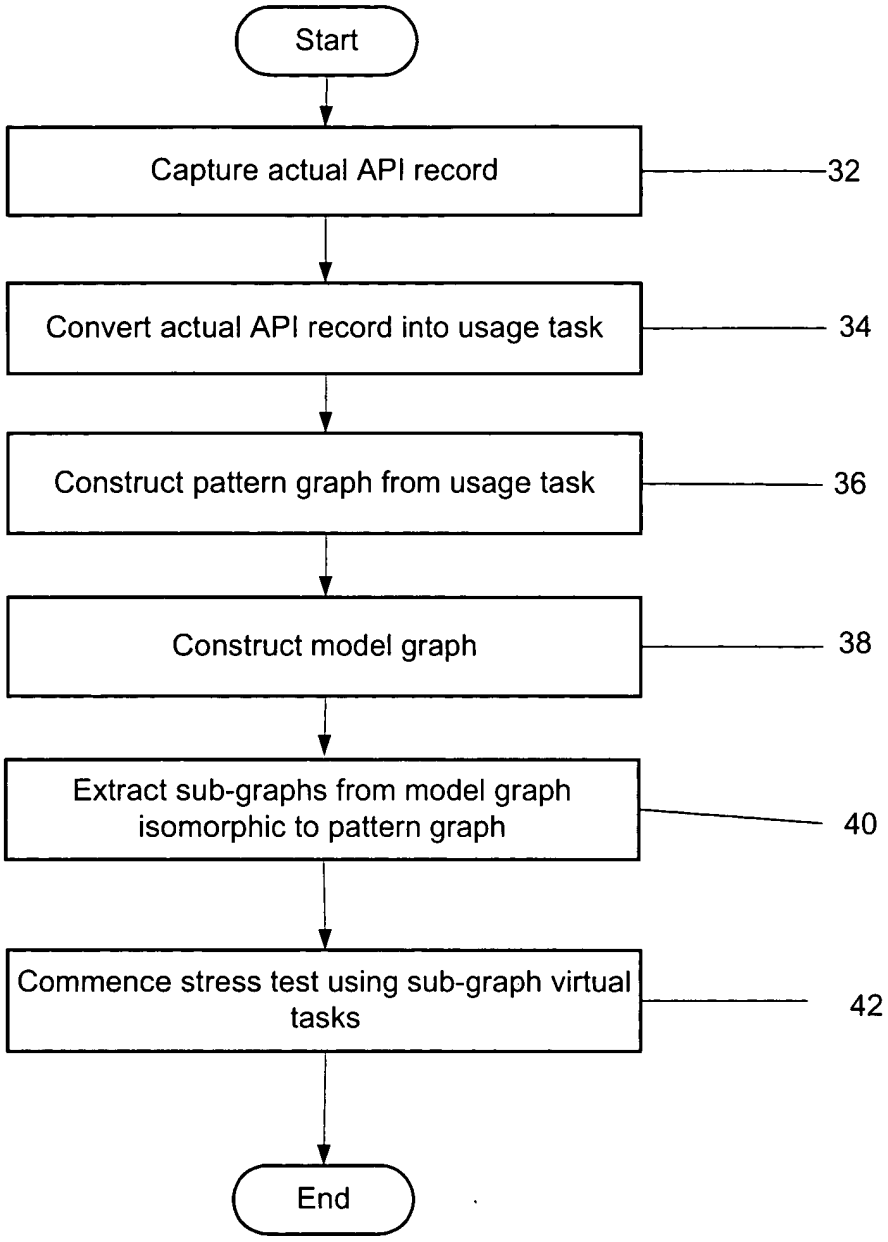



**Fig. 3**

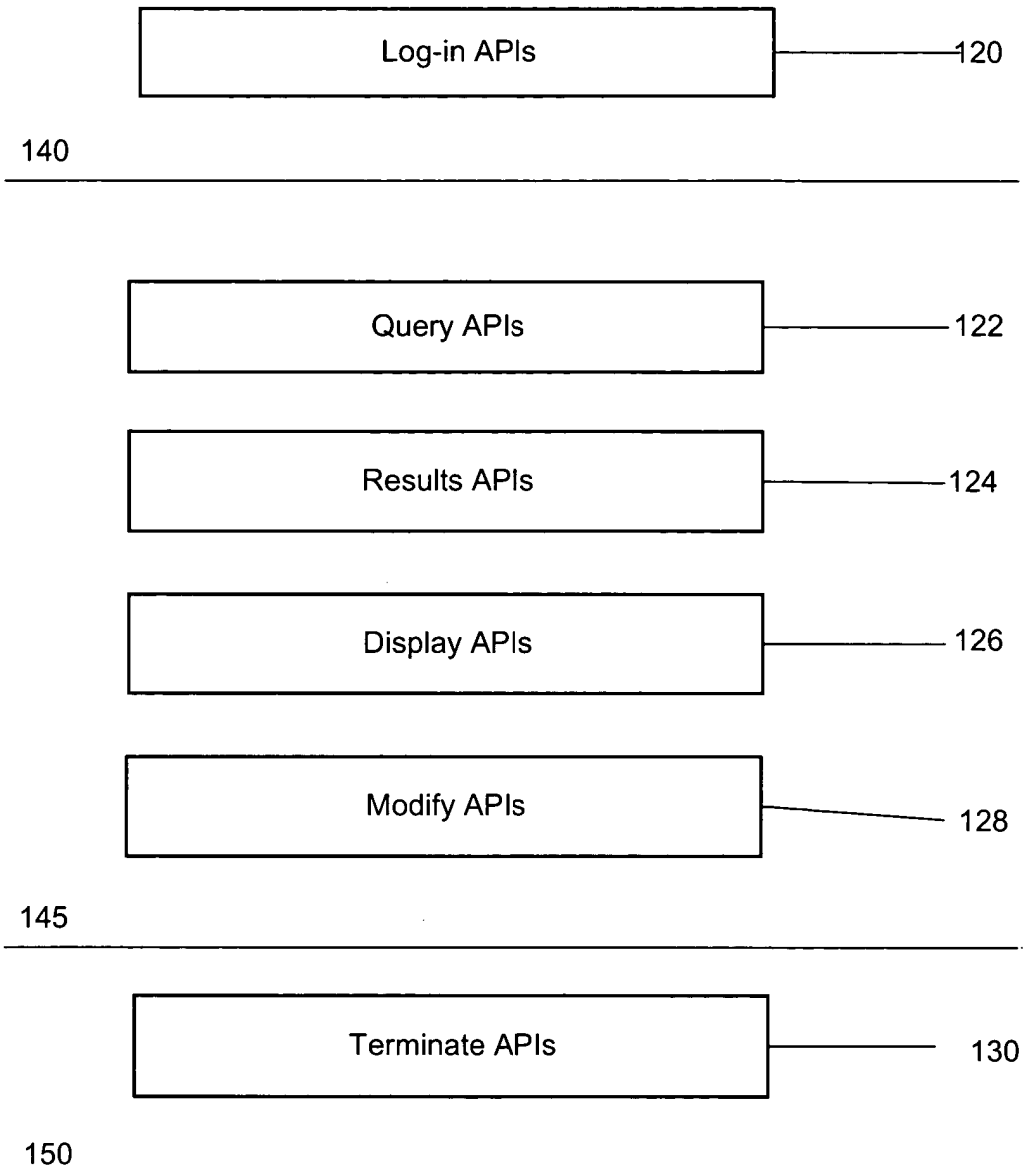

Log-in APIs
120
140
Query APIs
122
Results APIs
124
Display APIs
126
Modify APIs
128
145
Terminate APIs
130
150

**Fig. 4**

Pattern Graph 50

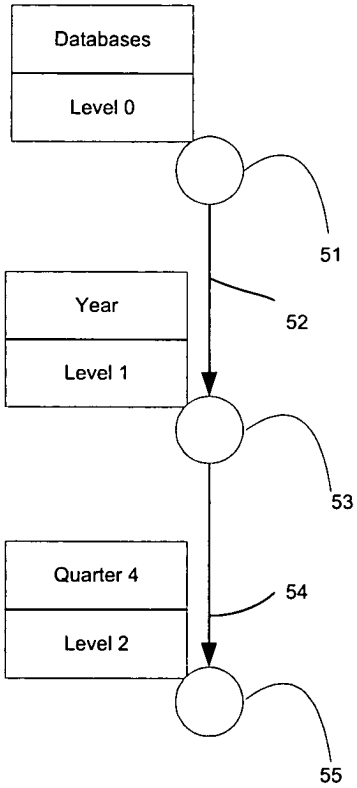



Fig. 5

Model Graph 60

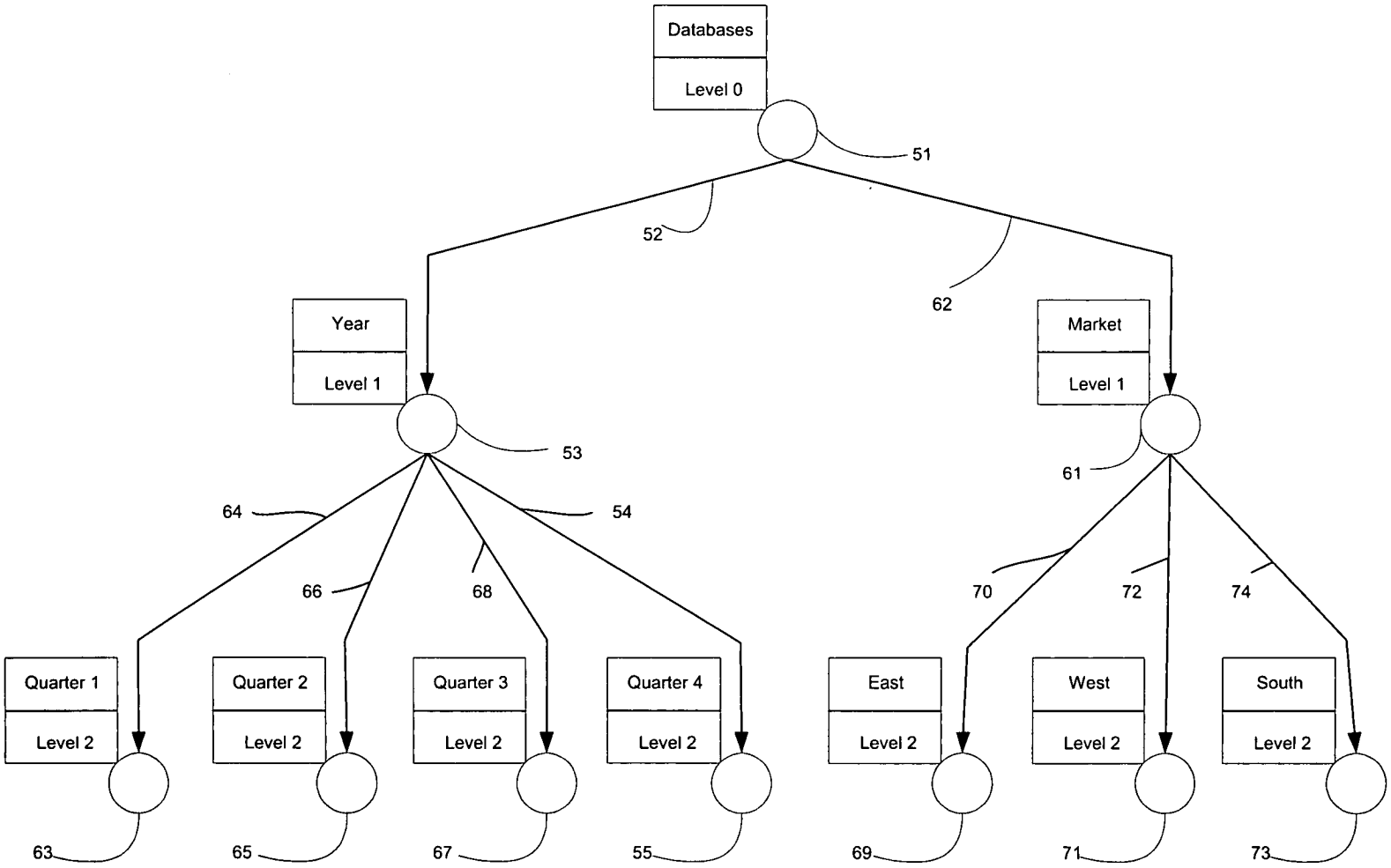



Fig. 6

Sub Graph 80

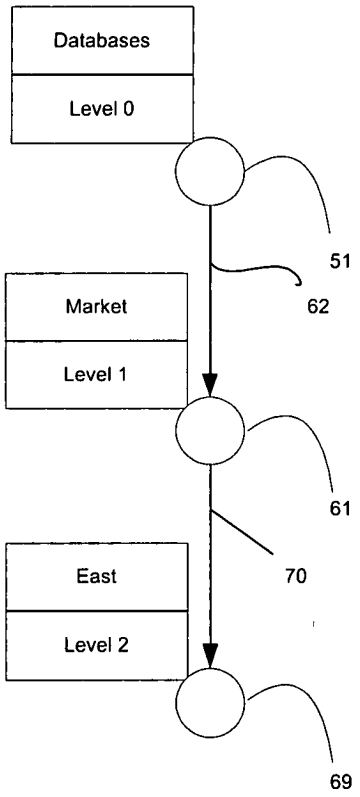



Fig. 7a

Sub Graph 85

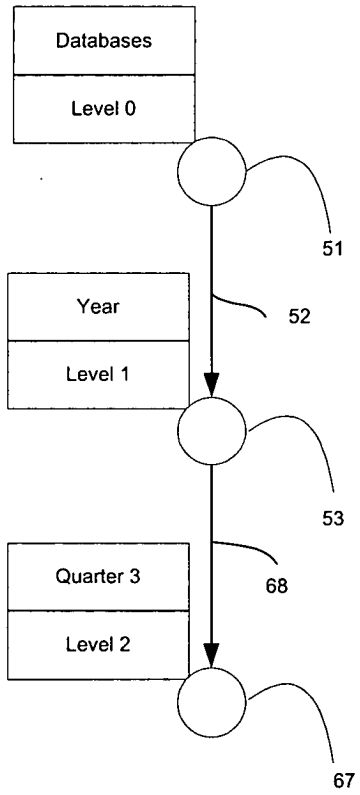



Fig. 7b

Pattern Graph Construction 90

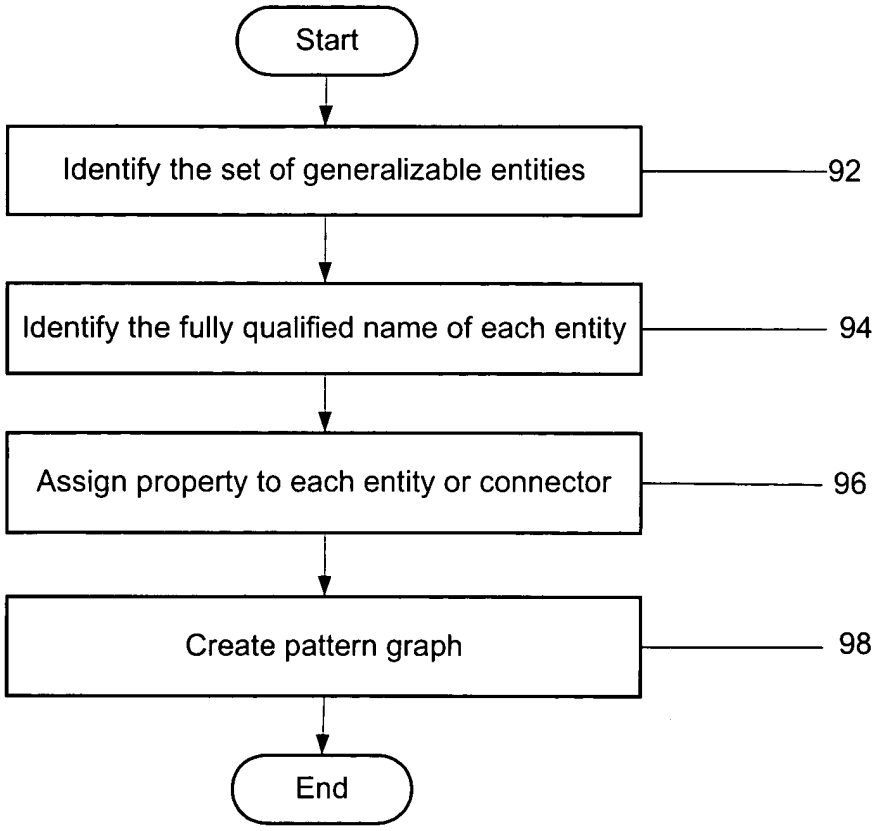



**Fig. 8**

Demo 200

| 202 C1 | 204 C3 |
|---|---|
| 001 | 2002 |
| 002 | 4444 |
| 003 | 2001 |
| 004 | 1234 |
| 005 | 8888 |

Fig. 9

Pattern Graph 210

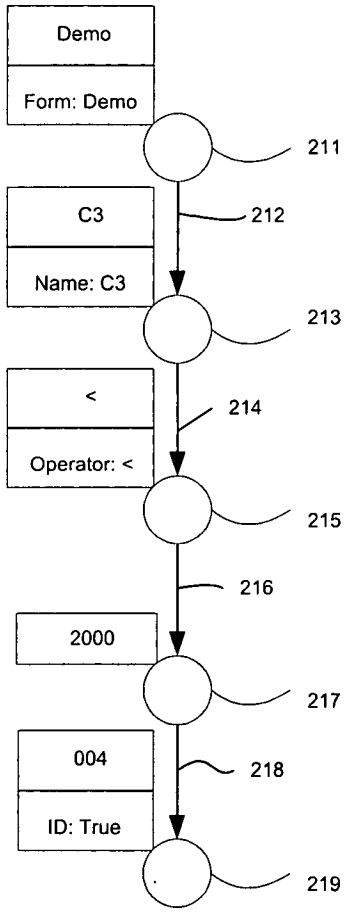



Fig. 10

Model Graph 230

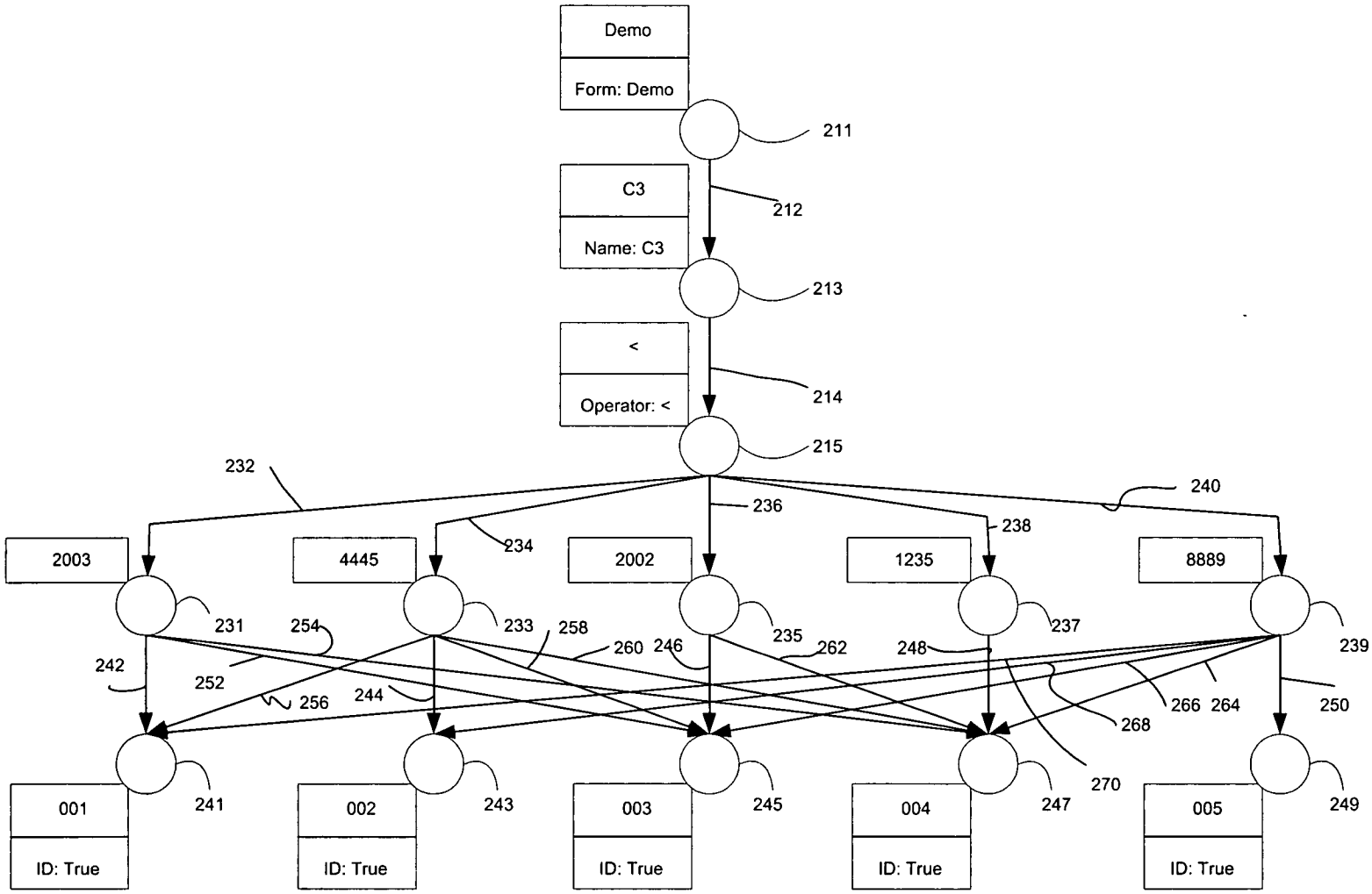



Fig. 11

Isomorphic Subgraph 280

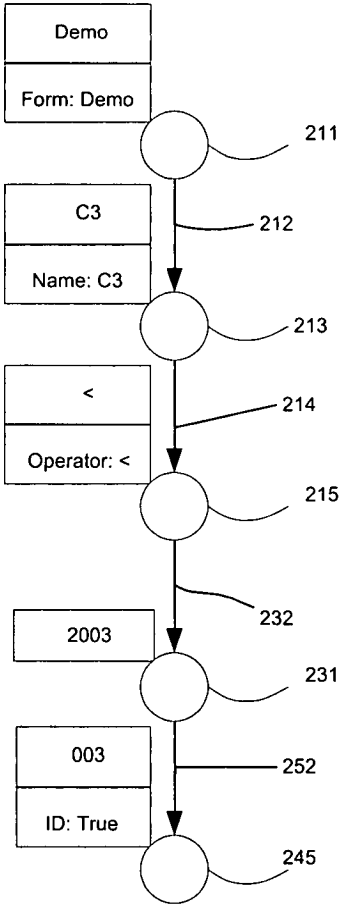



**Fig. 12**

Breadth - First Search 300

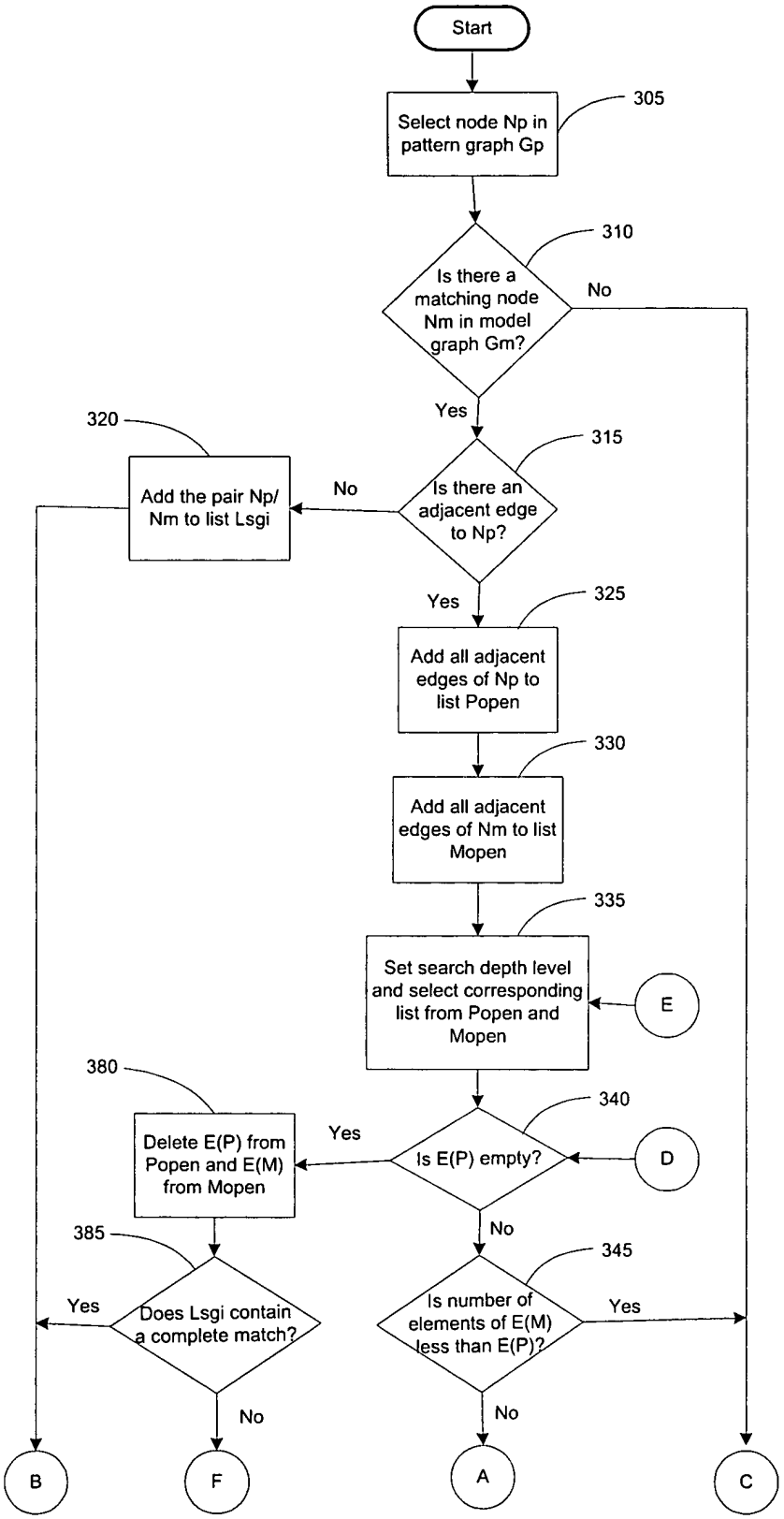
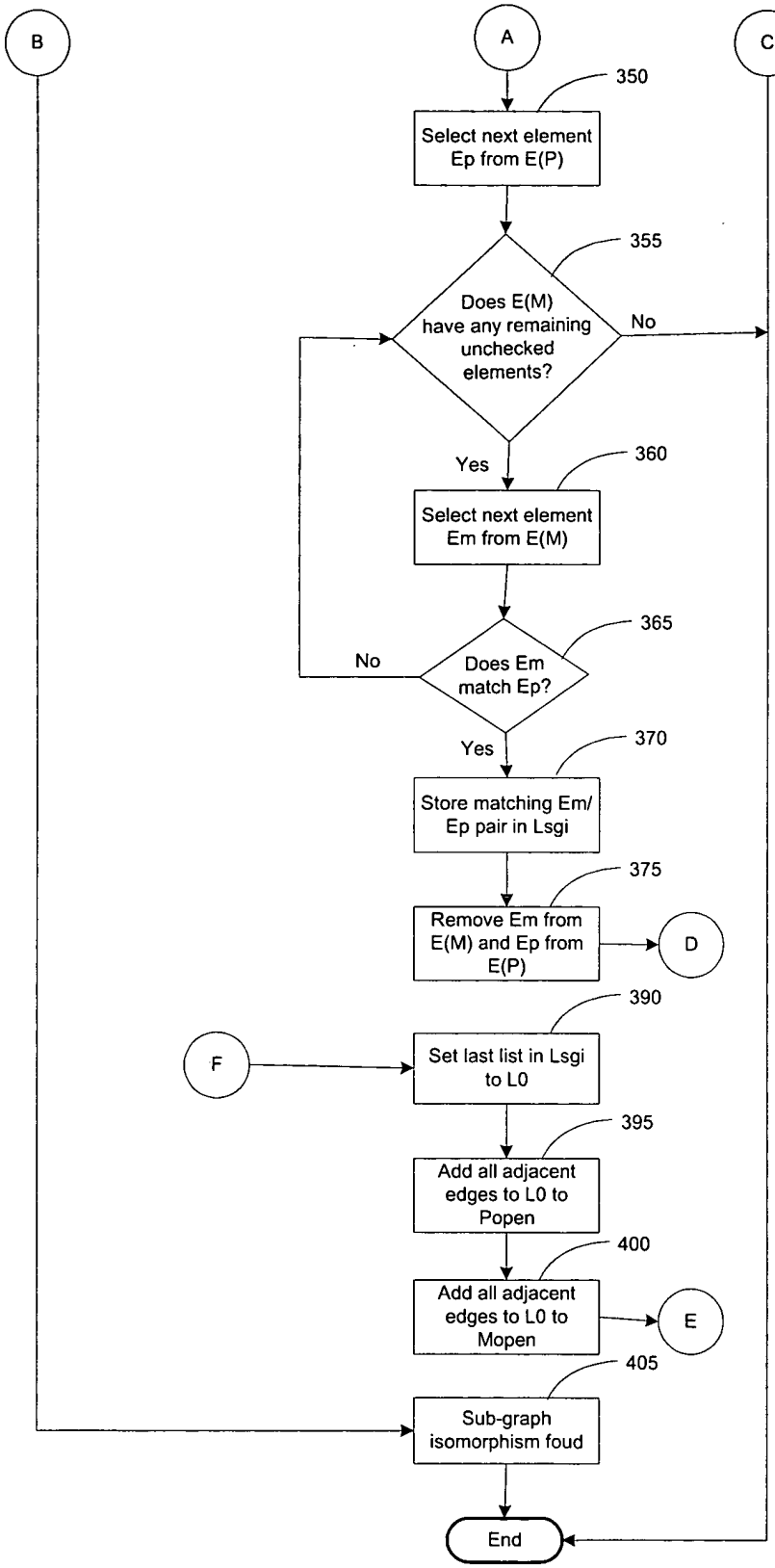



Fig. 13A




Breadth - First Search 300
(cont'd)

Fig. 13B

Depth - First Search 500

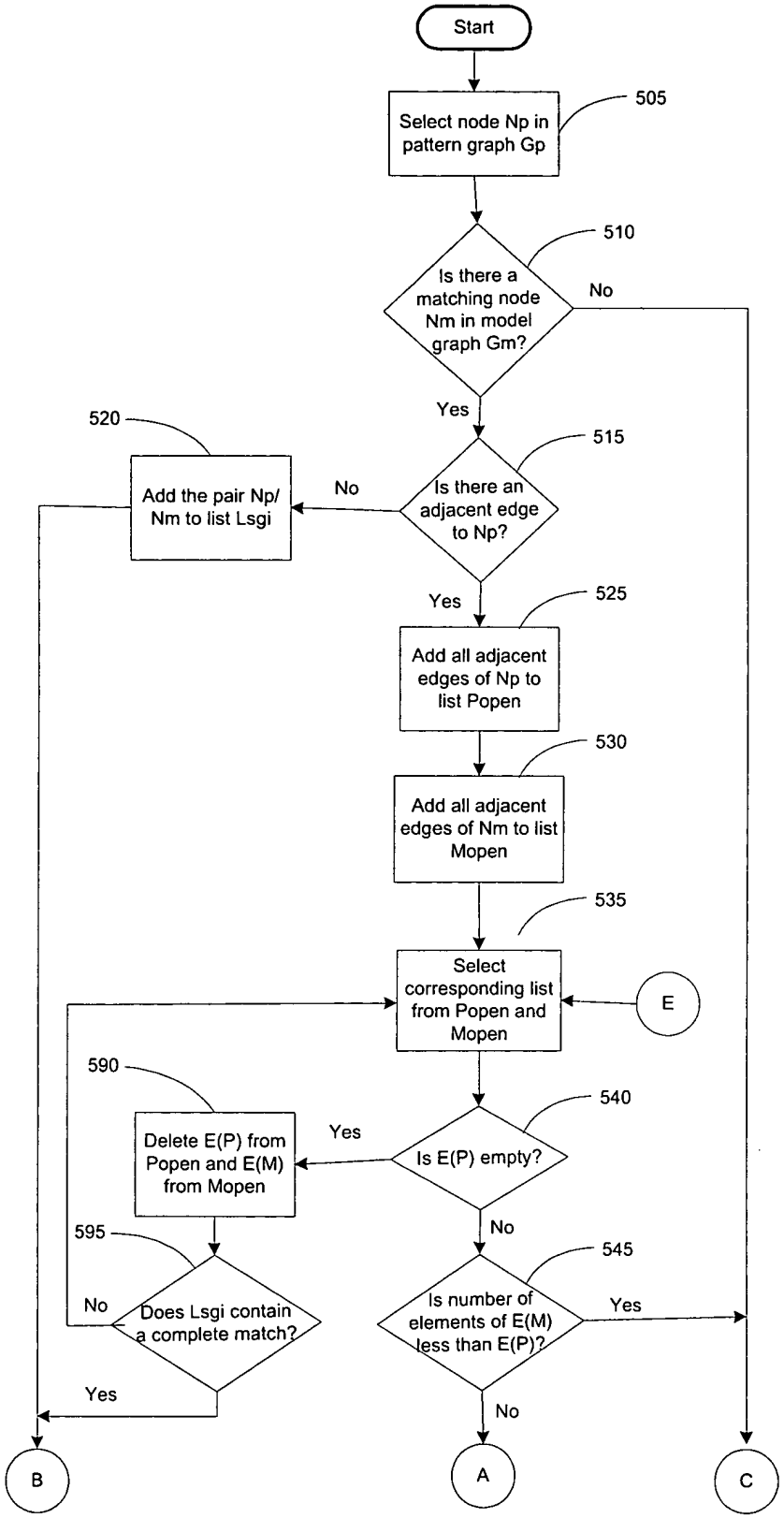



Fig. 14A

Depth - First Search 500
(cont'd)

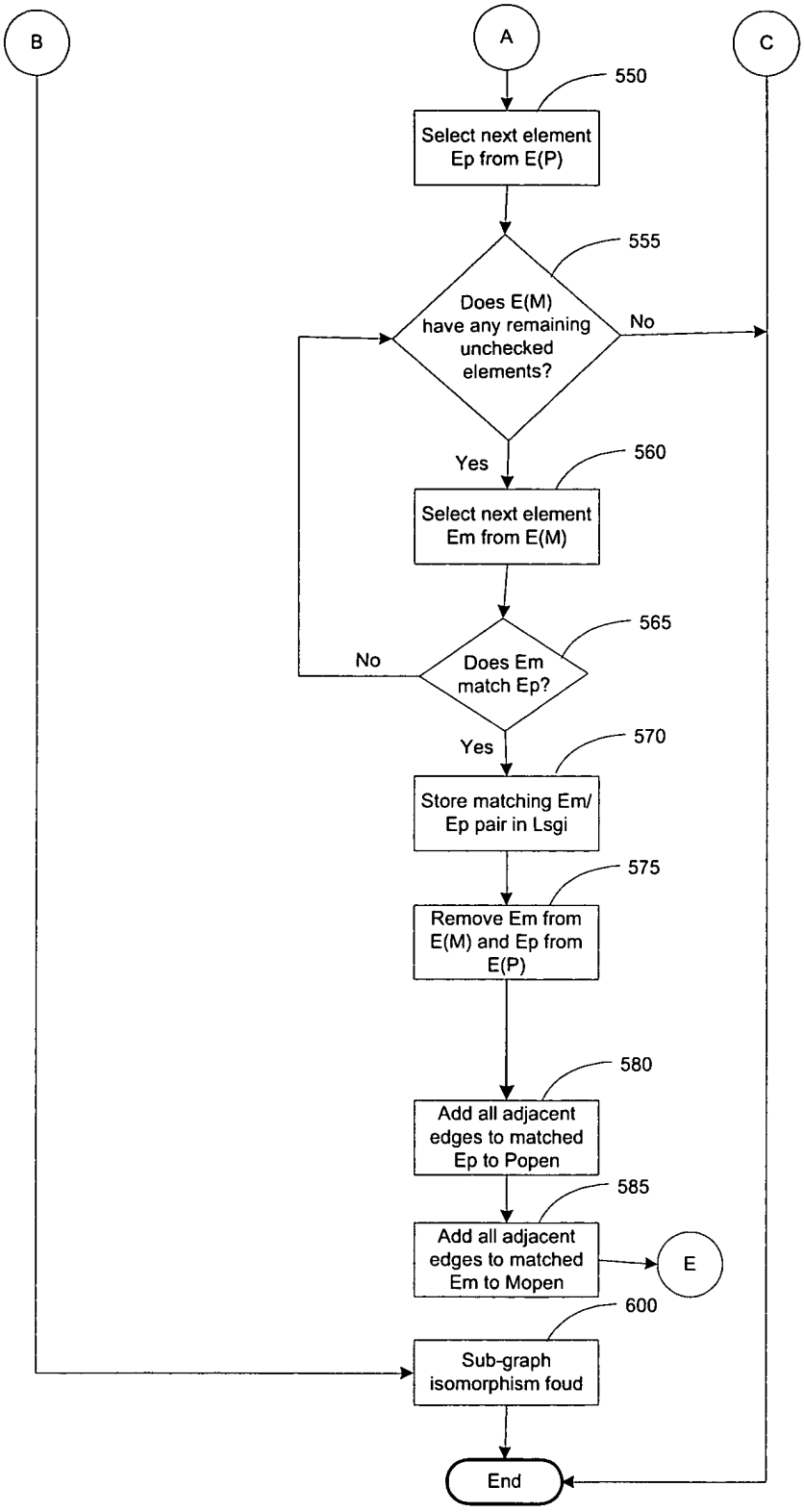



Fig. 14B